

REMARKS

The claims in the application are claims 1-16, 19-21, 23-25, 27 and 29. Claims 17, 18, 22, 26, 28 and 30 have been cancelled. Claims 31-60 have been withdrawn without prejudice as being directed to non-elected inventions.

It is pointed out that claim 1 has been amended to provide that the definition of R¹² include phenyl in view of claims 27 and 29. Also, claim 1 has been amended to provide that the definition of R¹⁰ includes phenyl in view of claim 21. The above noted dependent claims were part of the original disclosure thus supporting these amendments.

The Examiner has cited two patents to Herber, US 3,976,585 (hereinafter referred to as "the '585 patent") and US 3,941,709 (hereinafter referred to as "the '709 patent") It is observed that the monocyclic compounds of the '585 patent and the norborane compounds of the '709 patent are patentably distinct.

The Examiner has rejected claims 1-3 under 35 U.S.C. 102 (b) as being anticipated by the '585 patent. This rejection is respectfully traversed in view of the above amendments and following remarks. The '585 patent discloses substituted cyclohexylepoxides wherein the substituents are limited to alkyl groups of various lengths. The presently amended claims are not anticipated by the disclosure of '585. The '585 patent does not disclose or suggest substituents of monoepoxycyclohexylane (formula I of claim 1) containing aryl, or ether linkages as being useful as an acid scavenger in functional fluids that produce carboxylic acid. Thus, the patentable differences between the present claims 1-3 include the difference between arylalkyl and ether and alkyl as well as aryl linkages and alkyl. There is nothing in the '585 patent that would have lead one of ordinary skill to modify the disclosure of the '585 in the manner now claimed herein. In view of the above amendments to claims 1-3 it is submitted that there is no longer any basis for a rejection under 35 U.S.C. 102(b) in view of the '585 patent. Accordingly, the Examiner is respectfully requested to withdraw the rejection of claims 1-3 under 35 U.S.C. 102(b) on the basis of the '585 patent.

The Examiner has rejected claims 1, 16 and 17 under 35 U.S.C. 102(b) in view of the '709 patent. This rejection has been overcome by the above amendments to claims 1 and 16 and

the cancellation of claim 17. Claim 1 has been amended to provide only novel substituents to the norborane structure of formula II of claim 1. Similar to the '585, the '709 patent discloses alkyl groups as the variable in the substituents whether in an ester, ketone or ether linkage. The '709 patent does not disclose any substituent containing an aryl moiety. The present claims distinctly differ from the '709 patent and therefore the rejection under 35 U.S.C. 102(b) is requested to be withdrawn.

Claims 4-15, 22, 23, and 25-29 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Herber et al., the '585 patent. By the above amendments to the claims, the claims now patentably distinguish over the disclosure of the '585 patent. The '585 patent does not disclose or suggest the aryl substituents now claimed. Those claims claiming only the alkyl substituent have been cancelled.

Claims 18, 20 and 30 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Herber et al., the '709 patent. By the above amendments to the claims, the claims now patentably distinguish over the disclosure of the '709 patent. The '709 patent does not disclose or suggest the aryl substituents now claimed. Those claims claiming only the alkyl substituent have been cancelled.

In particular, the preferred composition of the '709 patent, the ester, was discovered to be ineffective with respect to the degradation product of the ester which is a carboxylic acid. More specifically, the ester described in the '709 patent oxidizes during use and produces a carboxylic acid. When the carboxylic acid ester decomposes into a carboxylic acid and an alcohol, the carboxylic acid is not scavenged by the epoxide. In the phosphate ester systems, the epoxide does not react or reacts very slowly with carboxylic acids. The decomposition of the carboxylic acid ester into a carboxylic acid and an alcohol coupled with the fact that the epoxide would not effectively react and remove that carboxylic acid in a phosphate ester based system led to unwanted acid build-up in the fluid. This discovery is the basis for the difference between the present invention and the cited prior art.

It is noted that the claims are specifically directed to reduced levels of carboxylic acid during use of the functional fluid. What the prior art did not appreciate was the fundamental problem with the carboxylic acid ester type of epoxides. The presently claimed epoxides do not contain the ester of the '702 patent.

Application of: Zhang, Jingen
Serial No.: 09/851,072
Amendment A

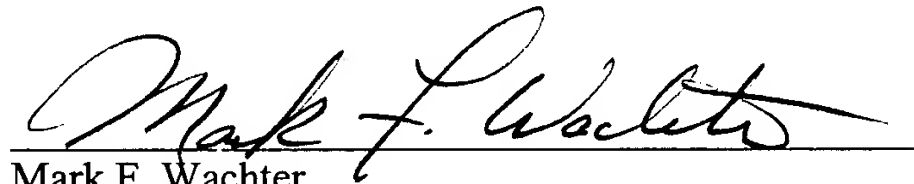
Applicants' request for extension of time under 37 CFR 1.136(a), as well as Applicants' petition fee, are enclosed herewith and filed simultaneously with this response.

If any issue regarding the allowability of any of the pending claims in the present application could be readily resolved, or if other action could be taken to further advance this application such as an Examiner's amendment, or if the Examiner should have any questions regarding the present amendment, it is respectfully requested that the Examiner please telephone Applicant's undersigned attorney in this regard.

Respectfully submitted,

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Mark F. Wachter

Reg. No. 27,243

Blackwell Sanders Peper Martin LLP

720 Olive Street, 24th Floor

St. Louis, Missouri 63101

(314) 345-6000

ATTORNEYS FOR APPLICANT